AMENDMENT

Amendment to the specifications

Please replace the paragraph that begins on application page 4, line 3, with the following replacement paragraph:

A reserve area 54, which the user typically can not access, can be located anywhere on the disk 36~~ (see Figs. 4-6)~~. A computer's operating system does not comprehend the existence of reserve area 54 ~~(see Fig. 5)~~ because, for example, the operating system operates in accordance with the parameters of a set_max command which is typically set to keep the operating system out of the reserve area 54. As such, a user's access to disk space is dependent on disk topology information provided by the operating system under the constraints of the set_max parameters. Original equipment manufacturers can access and alter the reserve area 54 using an OEM password to the IDE hard drive. User's, however, do to have access to the OEM password and therefore cannot access the reserve area 54. U.S. Patent No. 5,966,732 is hereby incorporated by reference, at least for its description of reserve areas and methods of interacting with the reserve areas.

Please replace the paragraph that begins on application page 5, line 10, with the following replacement paragraph:

In FIG. 2 a request to copy data or a file to the disk drive is received at 210_~~(see also Figs. 4-6)~~. At 215, the data is read into a read buffer at 215. The read buffer may be filled ~~(see Figs. 4-6)~~, or partially filled depending on the amount of data to copy. It may be filled many times during multiple writes for larger files to be copied. At 220, a determination is made whether a dual write flag or bit is set~~ (see Figs. 4-6)~~. If not, a normal single write is done as indicated at 230~~ (and Figs. 4-6)~~ for each time the read buffer is filled, and after each write, the buffer may be emptied or cleared. In further embodiments, the data to be read contains a header designating a dual write operation. If such a header is

read, it is determined that a dual write flag is set at 220~~ (see also Figs. 4, 5)~~.

Please replace the paragraph that begins on application page 5, line 19, with the following replacement paragraph:

If the dual write flag is set at 220~~ (see also Figs. 4-6)~~, the data is written a first time in a normal manner, the buffer is not cleared or emptied, and a second write location is calculated at 240 to determine where the second write is to occur~~ (see Figs. 4-6)~~. A write area 250 on the disk drive is used to illustrate the two locations identified at 260 and 270. In one embodiment, location 260 is within the reserve area of the drive, and location 270 is in the user portion of the drive. However, in further embodiments, the copies may be in the same portions of the drive, or yet further different portions.

Please replace the paragraph that begins on application page 6, line 4, with the following replacement paragraph:

In one embodiment a dual write function, referred to as a "set double write" is defined in an ATA (Advanced Technology Attachment) controller of the disk drive. It may be implemented as a dual write command in firmware ~~(see Fig. 6)~~, software and/or hardware. One way to define the set double write is to define an Extended INT 13. Extended INT 13 support for the following extended Function 51 sub-functions allows expansion ATA controller option ROMs to take advantage of the double write feature. The following codes and actions may be utilized to set the double write option, set the address spread, and to clear the double write option.

Please replace the paragraph that begins on application page 6, line 16.

~~The locations to write information can be determined based on an address spread within the dual write command. See Figs. 4-6.~~ In further embodiments, extensions outside of standards may be used. In one embodiment,

these commands are implemented in software running on a processor 310 in a disk drive 312 as shown in FIG. 3 to perform the functions identified in FIG. 2. Selected elements of FIG. 3 comprise the ATA controller for processing the commands. The data to be written is stored in buffer 315, which is coupled to processor 310 and also a bus or other communication path 320 to I/O 325. Commands are received by the processor 310 via I/O 325 or other means as desired. The commands are also issued by the computer system coupled to the disk drive. Data is written from the buffer 315 to a head disk assembly 330, where it is written twice onto the disks per FIG. 2 during a same write cycle. In further embodiments, the data is written to even further locations. Such further locations may be a default backup area of the drive or may be specified by the user or a multiple write command, identifying more than two locations.

Please insert the following new paragraph immediately on application page 6, line 31.

Referred to Fig. 4, the method of writing information to a storage device comprises the following steps. In Step 41, providing a reserve area of the storage device that is not accessible by the operating system or the user. In step 42, receiving a dual write command in firmware to write information to the storage device. In step 43, determining two locations on the storage device to write the information. In step 44, performing a single reading of the information to be written into a read buffer. In step 45, determining to read the header or a bit flag designating a dual write operation or not. If reading the header or the bit flag, then performing the step 46, writing the information to both of the two locations based on the single reading of the information. Wherein

the read buffer is not cleared between the writing of the information to both of the two locations; and wherein a first one of the two locations is within a reserve area of the storage device and a second one of the two locations is outside of the reserve area of the storage device.

Referred to Fig. 5, the method of writing information to a single disk drive storage device comprises the following steps. In step 51, receiving a command to write information to the single disk drive storage device. In step 52, determining if the command is a dual write command. If the command is a dual write command, then perform the step 53, determining two locations on the single disk drive storage device to write the information. In step 54, reading the information to be written into a read buffer. In step 55, writing the information to both of the two locations on the single disk drive storage device based upon a single reading of the information. Wherein the read buffer is not cleared between the writing of the information to both of the two locations; and wherein a first one of the two locations is within a reserve area of the storage device and a second one of the two locations is outside of the reserve area of the storage device.

Please replace the paragraph that begins on application page 4, line 6, with the following replacement paragraph

FIG. 1 is a block diagram of an example computer for implementing certain aspects of the present invention.

FIG. 2 is a block flow diagram of an example of identifying commands to write to dual locations in a storage device.

FIG. 3 is a simplified block diagram of a disk drive with controller.

FIG. 4 is a block flow diagram of another example of identifying commands to write to dual locations in a storage device.

FIG. 5 is a block flow diagram of another example of identifying commands to write to dual locations in a storage device.

~~FIG. 6 is a block flow diagram of another example of identifying commands to write to dual locations in a storage device.~~